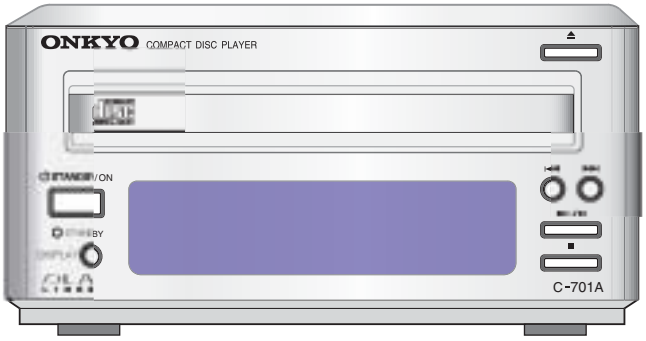
Ref. No. 3696
092001

ONKYO® SERVICE MANUAL

Compact Disc Player

MODEL C-701A



Silver model

SMPP,SMGT	230-240V AC, 50Hz
SMDT	120V AC, 60Hz
SMGR	220-230V AC, 50/60Hz

SAFETY-RELATED COMPONENT WARNING!!

COMPONENTS IDENTIFIED BY MARK ⚠ ON THE SCHEMATIC DIAGRAM AND IN THE PARTS LIST ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE THESE COMPONENTS WITH ONKYO PARTS WHOSE PART NUMBERS APPEAR AS SHOWN IN THIS MANUAL.

MAKE LEAKAGE-CURRENT OR RESISTANCE MEASUREMENTS TO DETERMINE THAT EXPOSED PARTS ARE ACCEPTABLY INSULATED FROM THE SUPPLY CIRCUIT BEFORE RETURNING THE APPLIANCE TO THE CUSTOMER.

ONKYO®
IMAGINATIVE SIGHT & SOUND

SERVICE PROCEDURES 1

PROTECTION OF EYES FROM LASER BEAM DURING SERVICING

This set employs a laser. Therefore, be sure to follow carefully the instructions below when servicing.

WARNING!!

SERVICE WARNING : DO NOT APPROACH THE LASER EXIT WITH THE EYE TOO CLOSELY. IN CASE IT IS NECESSARY TO CONFIRM LASER BEAM EMISSION, BE SURE TO OBSERVE FROM A DISTANCE OF MORE THAN 30cm FROM THE SURFACE OF THE OBJECTIVE LENS ON THE OPTICAL PICKUP BLOCK.

Laser Diode Properties

Material: GaAS/GaAlAs
Wavelength: 780nm
Laser output: max. 0.5mW*
Emission Duration: continuous
*This output is the value measured at a distance about 1.8mm from the objective lens surface on the Optical Pickup Block.

LASER WARNING LABEL

The labels shown below are affixed.

1. Warning label

DANGER:
INVISIBLE LASER RADIATION WHEN OPEN AND INTERLOCK FAILED OR DEFEATED. AVOID DIRECT EXPOSURE TO BEAM.

CAUTION:
HAZARDOUS LASER AND ELECTROMAGNETIC RADIATION WHEN OPEN AND INTERLOCK DEFEATED.

ATTENTION:
RAYONNEMENT LASER ET ELECTROMAGNETIQUE DANGEREUX SI OUVERT AVEC L'ECLENCHEMENT DE SECURITE ANNULE.

2. Class 1 label

MPP/MGT

MDT

MGR

---

1. Replacing the fuse

THIS SYMBOL LOCATED NEAR THE FUSE INDICATES THAT THE FUSE USED IS SLOW OPERATING TYPE FOR CONTINUED PROTECTION AGAINST FIRE HAZARD,REPLACE WITH SAME TYPE FUSE. FOR FUSE RATING REFER TO THE MARKING ADJACENT TO THE SYMBOL

CE SYMBOLE INDIQUE QUE LE FUSIBLE UTLISE EST E LENT. POUR UNE PROTECTION PERMANENTE,N'UTILISER QUE DES FUSIBLES DE MEME TYPE. CE DARNIER EST INDIQUE LA QU LE PRESENT SYMBOL EST APPOSE.

REF. NO.	PART NO.	DESCRIPTION
F901	252074	2A-SE-EAK <MPP,MGR,MGT>

2.Safety check out (Only U.S.A. model)

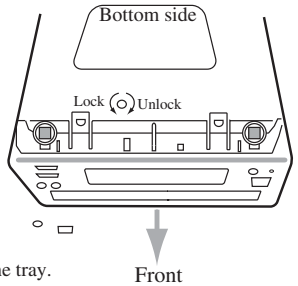
After correcting the original service problem perform the following safety check before releasing the set to the customer.
Connect the insulating-resistance tester between the plug of power supply cord and terminal GND on the back panel.
Specifications: More than 10 M ohm at 500V.

SERVICE PROCEDURES 2

1. Removement of tray

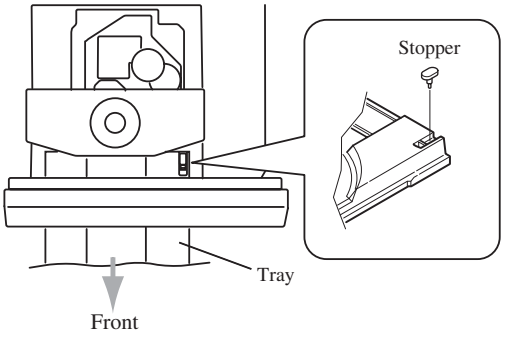
1. Remove the top cover
2. Turn the locked screw to the clockwise to release the lock of gear. (Refer to fig-1)

Fig-1



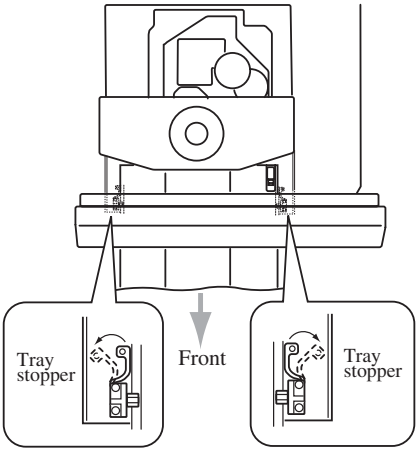
3. Pull out the tray.
4. Remove the stopper. (Refer to fig-2)

Fig-2



5. Press the tray stopper to the arrow mark direction and remove the tray ass'y. (Refer to fig-3)

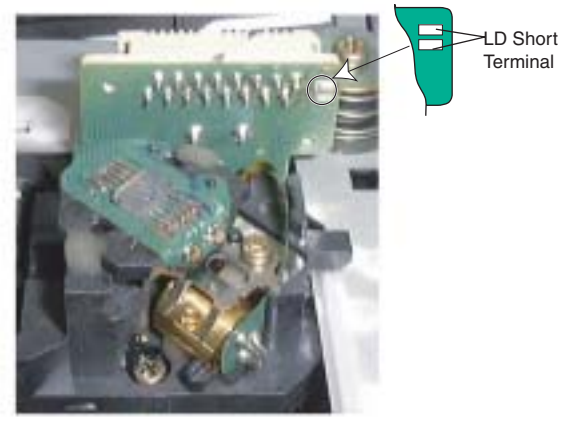
Fig-3



2. Replacement of optical pick-up

The laser diode in the optical pickup block is so sensitive to static electricity, surge current and etc. that the components are liable to be broken down or its reliability remarkably deteriorated.
During repair, carefully take the following precautions.

1. Solder the LD short terminal on mechanism.
2. Disconnect the flexible flat cable P101.
3. Replace the optical pickup.
4. Connect the flexible flat cable P101.
5. Unsolder the LD short terminal on mechanism.



Pick up short land

NOTE

1. Ground for the work-desk.
   Place a conductive sheet such as a sheet of copper (with impedance lower than 10Mohm) on the work-desk and place the set on the conductive sheet so that the chassis can be grounded.
2. Grounding for the test equipments and tools.
   Test equipments and toolings should be grounded in order that their ground level is the same the ground of the power source.
3. Grounding for the human body.
   Be sure to put on a wrist-strap for grounding whose other end is grounded.
   Be particularly careful when the workers wear synthetic fiber clothes, or air is dry.
4. Select a soldering iron that permits no leakage and have the tip of the iron well-grounded.
5. Do not check the laser diode terminals with the probe of a circuit tester or oscilloscope.

SPECIFICATIONS

Signal readout system : Optical non-contact

Reading rotation : About 500 - 200 r.p.m.
(constant linear velocity)

Linear velocity : 1.2 - 1.4 m/s

Error correction system :
Cross Interleave Reed Solomon code

D/A converter : 1 bit D/A converter

Sampling frequency : 352.8 kHz
(Eight-times oversampling)

Number of channels : 2 (stereo)

Frequency response : 5 Hz - 20 kHz

Total harmonic distortion : 0.009% (at 1 kHz)

Dynamic range : 92 dB

Signal to noise ratio : 80 dB

Channel separation : 80 dB (at 1 kHz)

Specifications and external appearance are subject to change without notice because of product improvements.

Wow and Flutter :
Below threshold of measurability

Output level : 2 volts r.m.s.

Power consumption :
AC 230-240 V, 50 Hz model : 8 watts
AC 220-230V, 50Hz/60Hz : 8 watts
AC 120 V, 60 Hz model : 9 watts

Power supply rating :
AC 230-240 V, 50 Hz
AC 220-230V, 50Hz/60Hz
AC 120 V, 60 Hz

Dimensions (W x H x D) :
155 x 76 x 283.5 mm <MGR> model
6-1/8" x 3" x 11-3/16"
155 x 76 x 281.5 mm <MPP/MGT> model
6-1/8" x 3" x 11-1/16"
155 x 76 x 277.5 mm <MDT> model

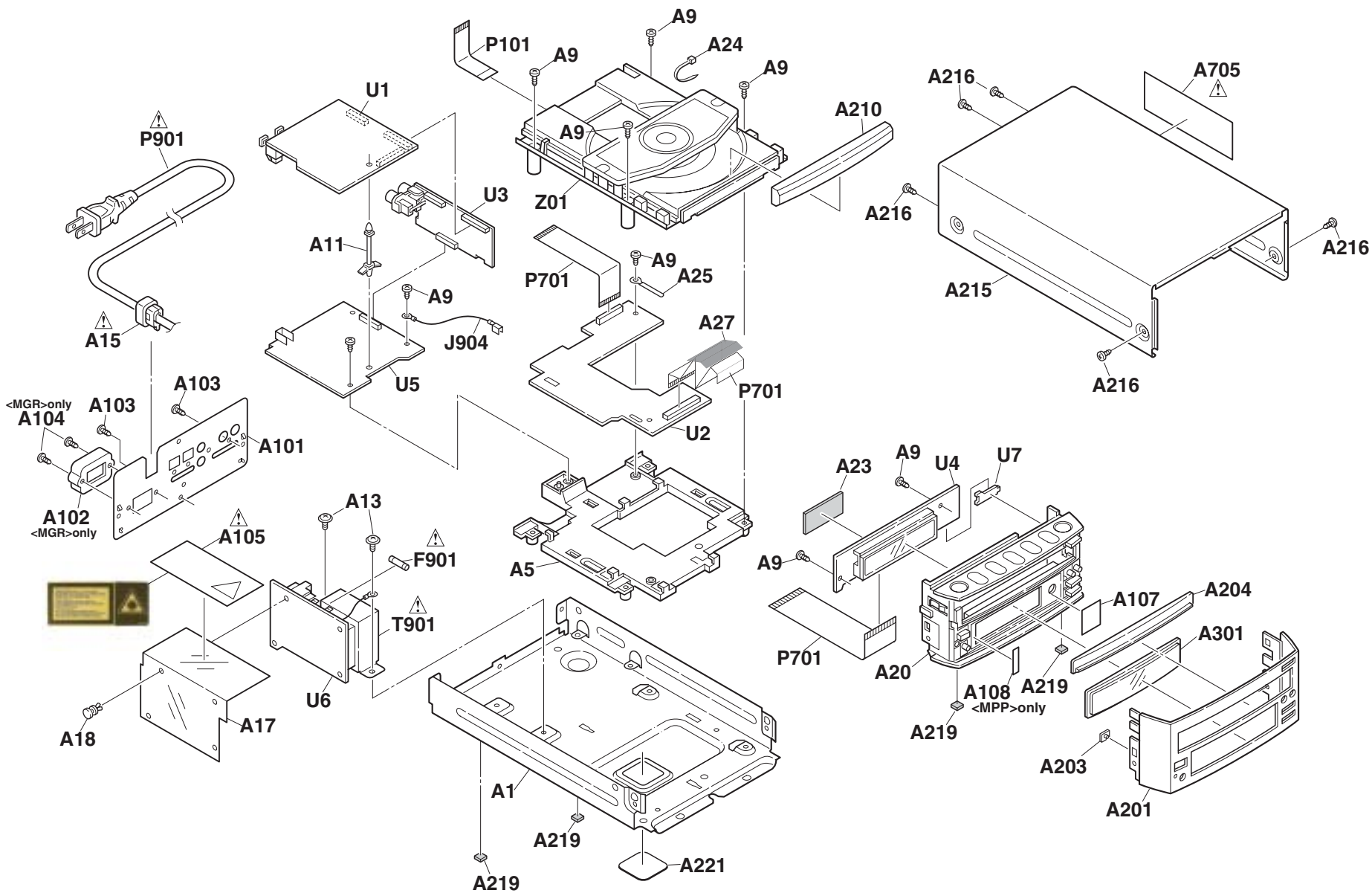
Weight : 2.0 kg, 4.4 lbs.

<MPP>: European model only
<MDT>: Taiwanese model only
<MGT>: Asian model only
<MGR>: Chinese model only

CONFIRM THE FL DISPLAY

1) Press the STANDBY key ON.
2) Press and hold down the STOP ■ button, then press the UP ►►| button.
After " 010702A" (Microprocessor version) is displayed. All the segments of FL tube light up after 1 seconds.
3) Press the STOP key . ("NO KEY" is displayed)
4) Confirm the each key.
5) Press the STANDBY key to release the test mode.

EXPLODED VIEW



EXPLODED VIEW PARTS LIST-1

REF. NO.		PART NO.	DESCRIPTION
A1		27100409	Chassis
A5		27191158A	Holder, PCB
A9		838130088	Self tapping screw, 3TTB+8B
A11		27190369	Holder, PCB
A13		830440069	Self tapping screw, 4TTC+6C(BC)
A15	⚠	27300750	Bushing, S-RELIEF #2271
A17		27150476	Shield plate (PT)
A18		880048	Plastic rivet, P-3055B-8L
A20		27111246	Front bracket
A23		28141478	Cushion
A24		260208	Wire tie
A25		27255004	Clip, CS-1U
A27		29110083	Tape CROSS-16U 16 x 35mm
A101		27122925	Rear panel <MPP>
		27122926	Rear panel <MDT>
		27122927	Rear panel <MGR>
		27122932	Rear panel <MGT>
A102		27191143	Holder Outlet <MGR>
A103		838430088	Self tapping screw, 3TTB+8B(BC) <MPP,MDT,MGT>
A104		838430088	Self tapping screw, 3TTB+8B(BC) <MGR>
A105	⚠	29362285	Label
A107		27262674	Plate, WIN1
A108		27262675	Plate, WIN1<MPP>
A201		27212346	Front panel
A203		28198939	Facet (S)
A204		27268055	Guide (Tray)
A210		28148497	Door (Tray)
A215		28184825	Cover
A216		838930088	Self tapping screw, 3TTB+8B(UN)
A219		28141489	Cushion
A221		27262671	Plate (Bottom)
A301		28191952A	Clear plate <MPP>
		28191944A	Clear plate <MDT,MGR,MGT>
A705		29362982	Label (AVIS&CLASS1) <MPP,MGT>
		29362939	Label (WARNING) <MDT>
		29362991	Label <MGR>
F901	⚠	252074 or	Fuse, 2A-SE-EAK <MPP,MGR,MGT>
	⚠	252074CC	
J904		2063A14070	Crimp assy
P101		2042161022	Flexible flat cable, NCFC2-161022
P701		2045351022	Flexible flat cable, NCFC5-351022
P703		2047201012	Flexible flat cable, NCFC7-201012

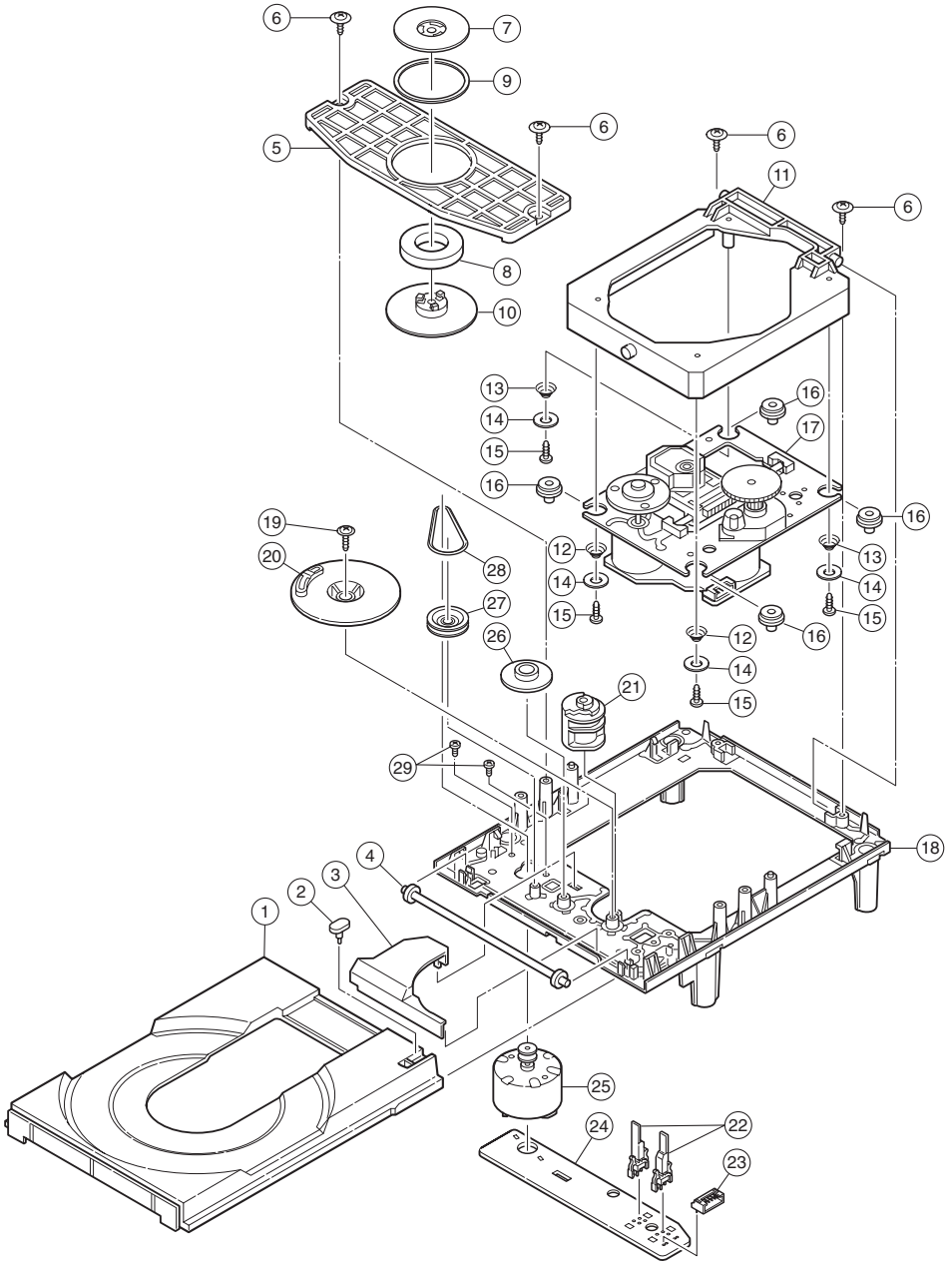
EXPLODED VIEW PARTS LIST-2

REF. NO.		PART NO.	DESCRIPTION
P901	⚠	253335HIT or	Power cord, AS-CEE <MPP,MGT>
	⚠	253336VOL	
	⚠	253332HIT or	Power cord, AS-UC-2 <MDT>
	⚠	253333VOL	
	⚠	253337HIT or	Power cord, AS-CCEE <MGR>
	⚠	253338VOL	
T901	⚠	2301553	Power transformer, NPT-1426P <MPP>
	⚠	2301552	Power transformer, NPT-1426D <MDT>
	⚠	2301555	Power transformer, NPT-1426G <MGR,MGT>
U1		1H477523-1B	Main circuit PC board assy NADG-7323-1B <MGT>
		1H477523-1C	Main circuit PC board assy NADG-7323-1C <MDT>
		1H477523-1D	Main circuit PC board assy NADG-7323-1D <MGR>
		1H477523-1E	Main circuit PC board assy NADG-7323-1E <MPP>
U2		1H477524-1B	Microprocessor circuit PC board, NADG-7324-1B <MGT>
		1H477524-1C	Microprocessor circuit PC board, NADG-7324-1C <MDT>
		1H477524-1D	Microprocessor circuit PC board, NADG-7324-1D <MGR>
		1H477524-1E	Microprocessor circuit PC board, NADG-7324-1E <MPP>
U3		1H477525-1B	Driver circuit PC board assy, NAAF-7325-1B <MGT>
		1H477525-1C	Driver circuit PC board assy, NAAF-7325-1C <MDT>
		1H477525-1D	Driver circuit PC board assy, NAAF-7325-1D <MGR>
		1H477525-1E	Driver circuit PC board assy, NAAF-7325-1E <MPP>
U4		1H477526-1B	Display circuit PC board assy, NADIS-7326-1B <MGT>
		1H477526-1C	Display circuit PC board assy, NADIS-7326-1C <MDT>
		1H477526-1D	Display circuit PC board assy, NADIS-7326-1D <MGR>
		1H477526-1E	Display circuit PC board assy, NADIS-7326-1E <MPP>
U5		1H477527-1B	Regulator circuit PC board assy, NAPS-7327-1B <MGT>
		1H477527-1C	Regulator circuit PC board assy, NAPS-7327-1C <MDT>
		1H477527-1D	Regulator circuit PC board assy, NAPS-7327-1D <MGR>
		1H477527-1E	Regulator circuit PC board assy, NAPS-7327-1E <MPP>
U6		1H477528-1B	Power transformer PC board assy, NAPS-7328-1B <MGT>
		1H477528-1C	Power transformer PC board assy, NAPS-7328-1C <MDT>
		1H477528-1D	Power transformer PC board assy, NAPS-7328-1D <MGR>
		1H477528-1E	Power transformer PC board assy, NAPS-7328-1E <MPP>
U7		1H477529-1B	Open/ Close switch PC board assy, NASW-7329-1B <MGT>
		1H477529-1C	Open/ Close switch PC board assy, NASW-7329-1C <MDT>
		1H477529-1D	Open/ Close switch PC board assy, NASW-7329-1D <MGR>
		1H477529-1E	Open/ Close switch PC board assy, NASW-7329-1E <MPP>
Z01		24800018A	CD mechanism assy, NCD-170S

<MPP>: European model only
<MDT>: Taiwanese model only
<MGT>: Asian model only
<MGR>: Chinese model only

NOTE: THE COMPONENTS IDENTIFIED BY MARK ⚠ ARE CRITICAL FOR RISK OF FIRE AND ELECTRIC SHOCK. REPLACE ONLY WITH PART NUMBER SPECIFIED.

CD MECHANISM EXPLODED VIEW (1)



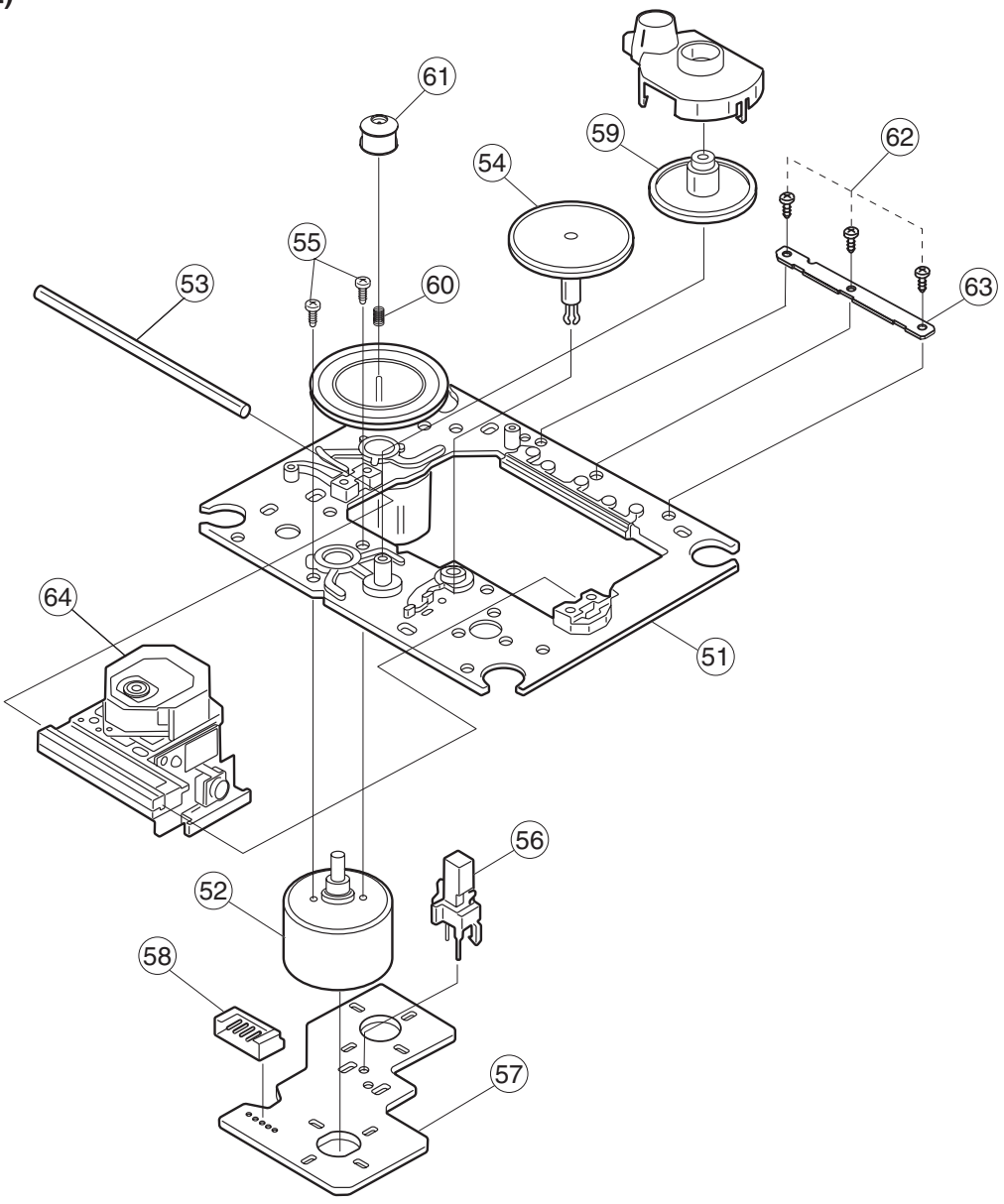
PARTS LIST

Ref. No.	Part No.	Description
1	2646-290-01	Tray
2	-	Stopper
3	2625-544-01	Gear cover
4	2625-535-01	Tray Gear
5	2625-546-01	Chucking plate
6	-	PTPWH2.6x7, Screw
7	2625-537-01	Chucking yoke
8	1452-493-21	Magnet
9	2625-541-02	Damper
10	2646-291-01	Chucking pulley
11	2646-288-01	Sub chassis
12	2627-236-01	Coil spring (front)
13	2627-235-01	Coil spring (back)
14	2646-289-01	Washer
15	-	P2.6x10, Screw
16	2627-234-01	Insulator
17	-	Drive unit
18	2625-552-06	Main chassis
19	3319-501-51	PTPWH2.6x16, Screw
20	2625-547-01	Drive Gear
21	2625-545-04	Control cam
22	1692-667-11	Leaf switch
23	1564-721-11	Socket
24	1640-523-11	Loading PC board
25	X2625-117-1	Loading motor
26	2625-274-02	Middle gear
27	2625-536-02	Loading pulley
28	3653-387-00	LM belt
29	-	B2.6x2.5, Screw

The mechanical parts with no part number in the exploded views are not supplied.

CD MECHANISM EXPLODED VIEW (2)

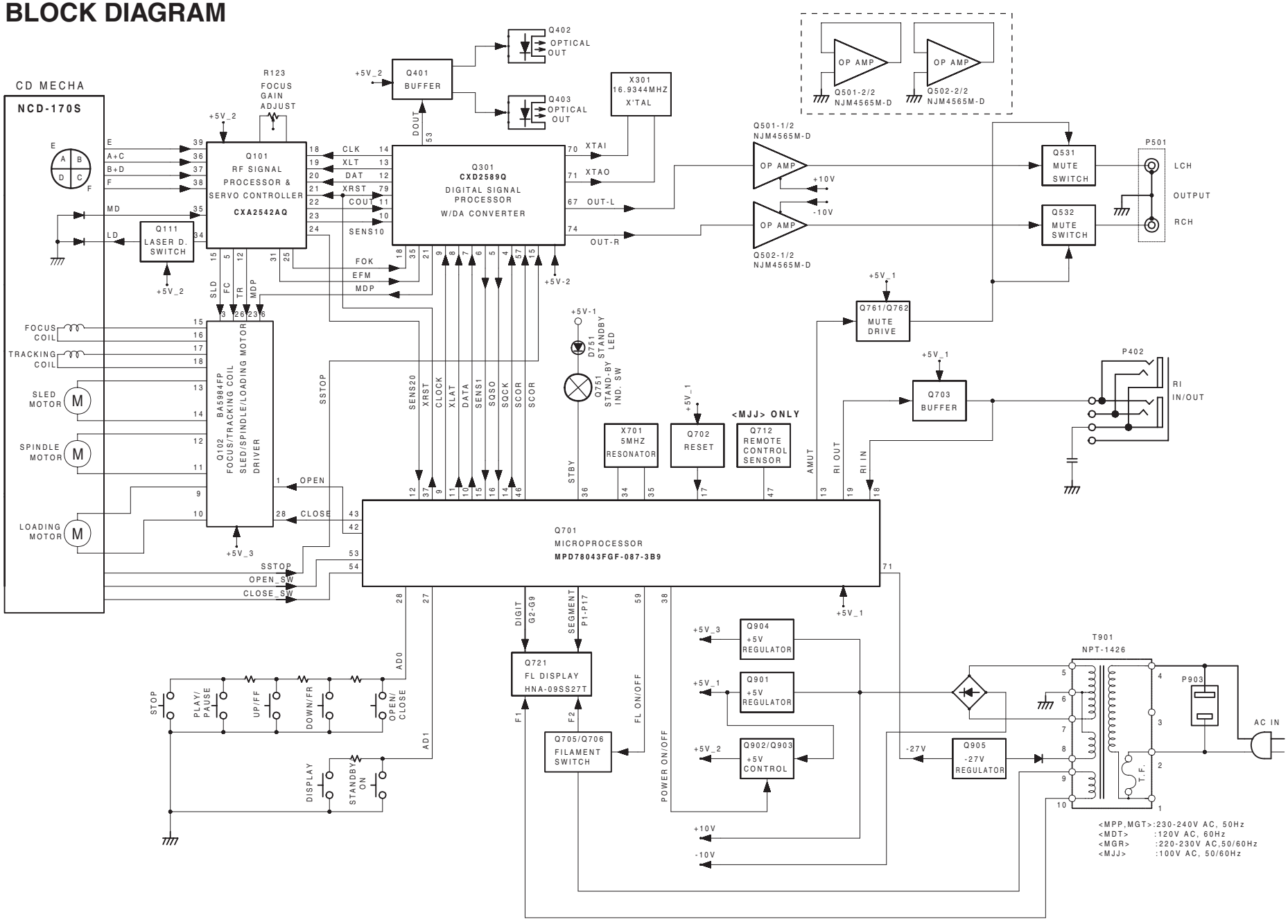
(Pickup drive unit)



PARTS LIST

Ref. No.	Part No.	Description
51	X2625-984-1	Motor chassis ass'y
52	X2625-769-1	Motor gear ass'y
53	2656-908-01	Sled shaft
54	2625-188-02	Gear A
55	7621-255-15	P2x3, Screw
56	1572-085-11	Leaf switch
57	1639-678-12	Motor PC board
58	1564-722-11	Socket
59	2627-003-02	Gear B
60	2625-191-01	Coil spring
61	2625-477-01	Center ring
62	2641-386-01	Special screw, 2*5
63	2625-625-01	Reinforcement board
64	8848-483-05	KSS-213C, Pickup

BLOCK DIAGRAM



SCHEMATIC DIAGRAM

U1 Main circuit PC board

CD Mechanism

NCD-170S

NADG-7323

NADG-7324

U2 Microprocessor circuit PC board

NASW-7329

U7 Open/close switch PC board

NADIS-7326 U4 Display circuit PC board

NAPS-7327

U5 Regulator circuit PCboard

NAPS-7328 U6 Power transformer PC board

NAAR-7325 U3 Driver circuit PC board

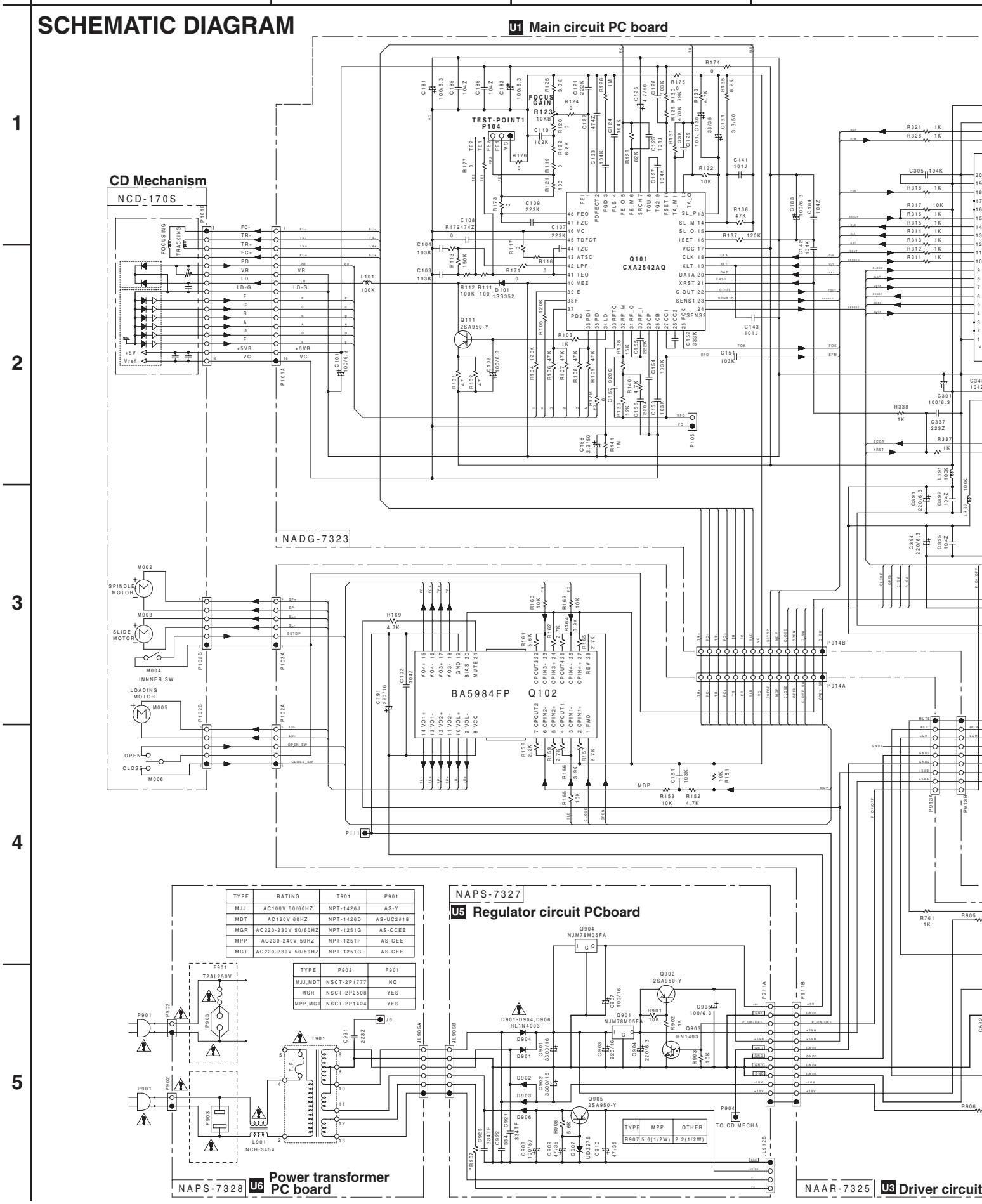
TYPE	RATING	T901	P901
MJJ	AC100V 50/60HZ	NPT-1426J	AS-Y
MGT	AC120V 60HZ	NPT-1426D	AS-UC2#18
MGR	AC220-230V 50/60HZ	NPT-1251G	AS-CCEE
MPP	AC230-240V 50HZ	NPT-1251P	AS-CEE
MGT	AC220-230V 50/60HZ	NPT-1251G	AS-CEE

TYPE	P903	F901
MJJ,MGT	NSCT-2P1777	NO
MGR	NSCT-2P2508	YES
MPP,MGT	NSCT-2P1424	YES

TYPE	MPP	OTHER
R907	5.6(1/2W)	2.2(1/2W)

	MJJ	OTHER
R730	NO	YES
C711	YES	NO

SCHEMATIC DIAGRAM



TYPE	RATING	T901	P901
MJJ	AC100V 50/60HZ	NPT-1426J	AS-Y
MDT	AC120V 60HZ	NPT-1426D	AS-UC2#18
MGR	AC220-230V 50/60HZ	NPT-1251G	AS-CCEE
MPP	AC230-240V 50HZ	NPT-1251P	AS-CEE
MGT	AC220-230V 50/60HZ	NPT-1251G	AS-CEE

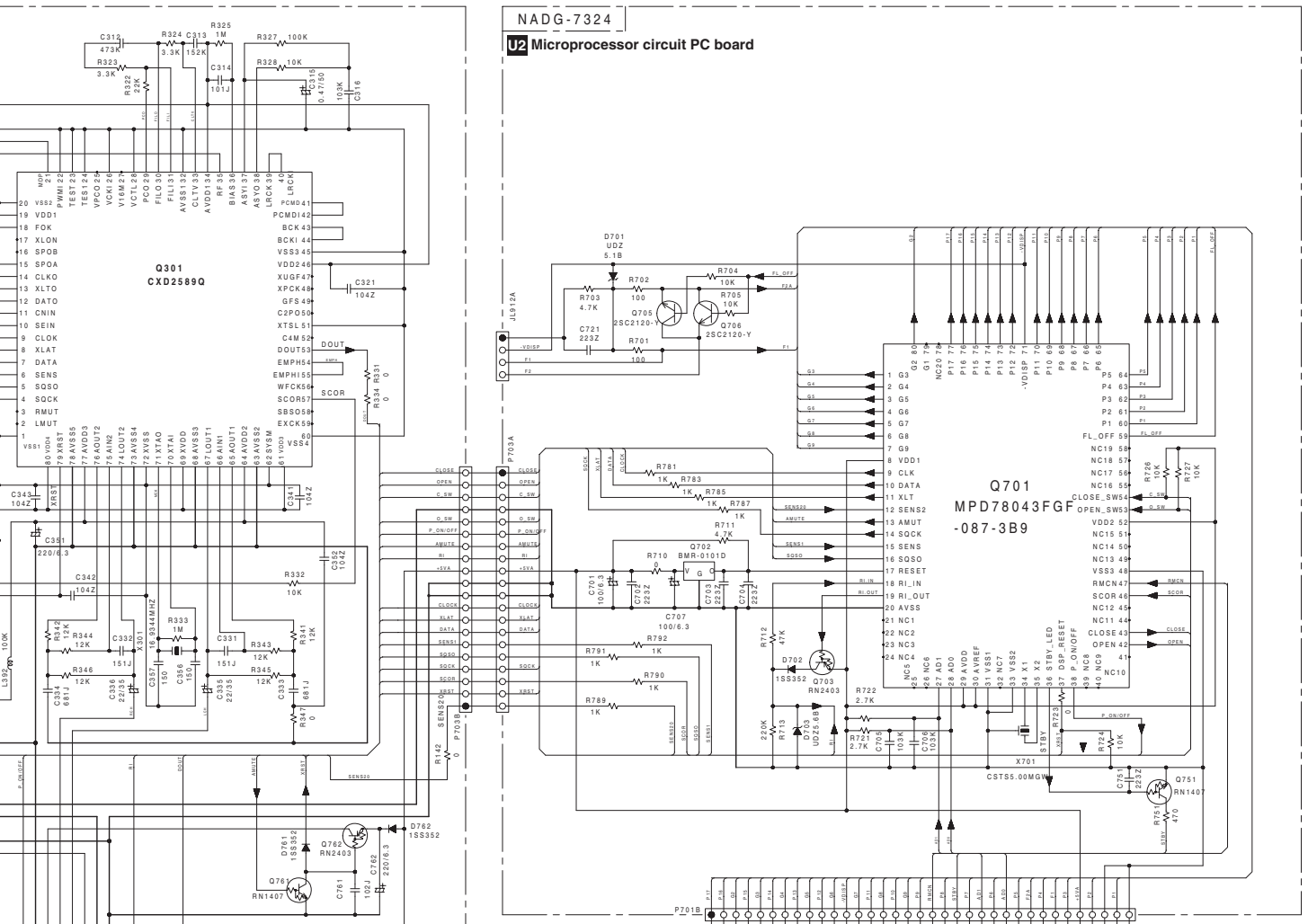
TYPE	P903	F901
MJJ,MDT	NSCT-2P1777	NO
MGR	NSCT-2P2508	YES
MPP,MGT	NSCT-2P1424	YES

TYPE	MPP	OTHER
R907	5.6(1/2W)	2.2(1/2W)

E F G H

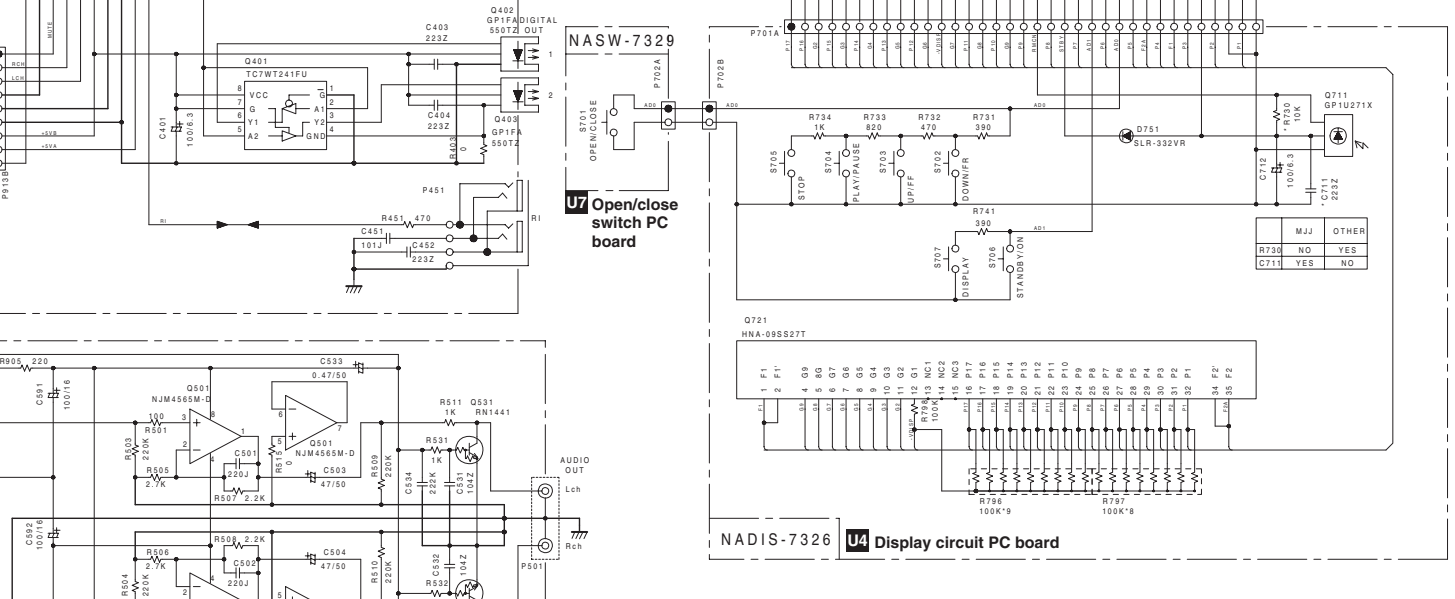
NADG-7324

U2 Microprocessor circuit PC board



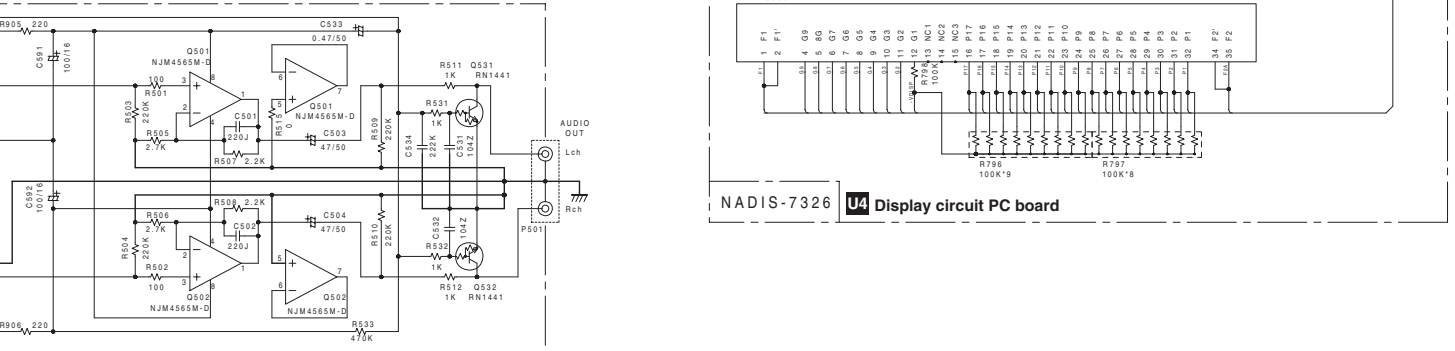
NASW-7329

U7 Open/close switch PC board

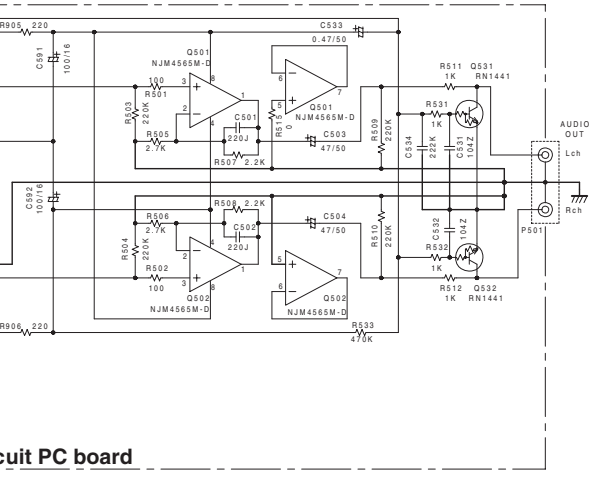


NADIS-7326

U4 Display circuit PC board

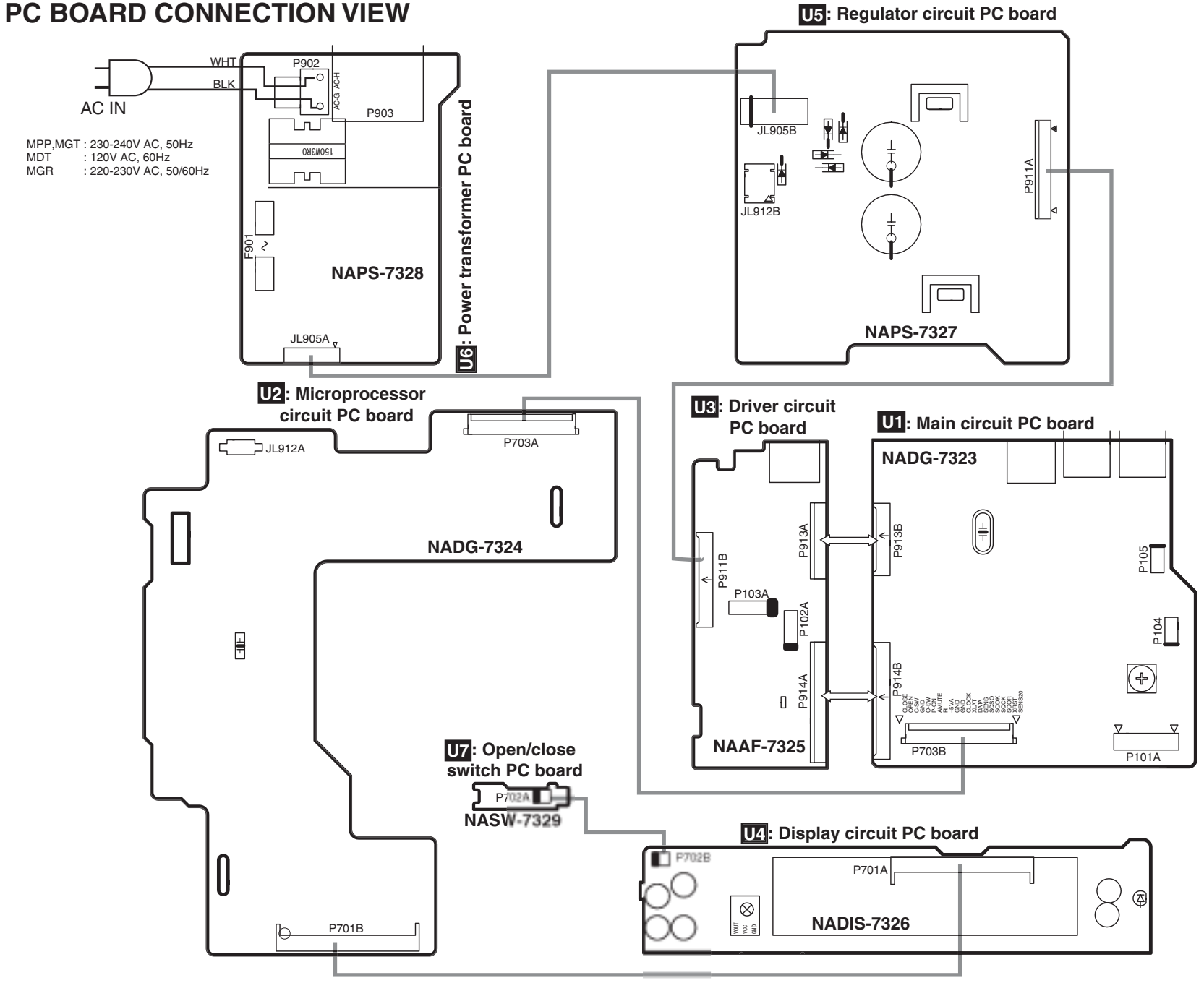


	MJJ	OTHER
R730	NO	YES
C711	YES	NO



cuit PC board

PC BOARD CONNECTION VIEW



PRINTED CIRCUIT BOARD PARTS LIST-1

U1: Main circuit PC board (NADG-7323-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q101	22241661R3	CXA2542AQ
Q301	22241500R3	CXD2589Q
Q401	22241546R2	TC7WT241FU
	Photo couplers	
Q402,Q403	24120082	GP1FA550TZ
	Transistors	
Q111	2211504	2SA950-Y
Q761	2216260R2	RN1407
Q762	2214540R2	RN2403
	Resonator	
X301	3010308	HC-49/U0316.9344M
	Diodes	
D101,D761, D762	223234R2 or 223269R2	1SS352 or 1SS355
	Coils	
L101,L391, L392	231237K100R2, Chol	NCH-1475
	Sockets	
P101A	25052316	NSCT-16P2213
P101A or	25052510	NSCT-16P2407
P703B	25052216	NSCT-20P2113
P913B	25051234	NSCT-9P1024
P914B	25051240	NSCT-15P1030
	Plugs	
P104,P105	25056132	NPLG-2P1071
	Jack	
P451	25045601	NPJ-2PDB409, RI terminal
	Capacitors	
C101,C102, C181-C183, C301	354721019	100uF,6.3V,Elect.
C126	354780479	4.7uF,50V,Elect
C130	354763309	33uF,35V,Elect
C131	354780339	33uF,50V,Elect
C158	393380227	2.2uF,50V, (VX) Elect.
C315	353784799	0.47uF,50V,Elect
C335,C336	353762209	22uF,35V,Elect
C351,C391, C394,C762	354722219	220uF,6.3V,Elect
C401	354721019	100uF,6.3V,Elect
	Resistor	
R123	5210262	N06HR10KBC, Trimmer

U2: Microprocessor circuit PC board (NADG-7324-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q701	22241694R3	MPD78043FGF-087-3B9
Q702	22241210	BMR-0101D
	Transistors	
Q703	2214540R2	RN2403
Q705,Q706	2211164	2SC2120-Y
Q751	2216260R2	RN1407
	Oscillator	
X701	3010343	CSTS0500MG06
	Diodes	
D701	224490510R2	UDZ5.1B, Zener
D702	223234R2 or 223269R2	1SS352 or 1SS355
D703	224490560R2 c 224550560R2	UDZ5.6B or UDZS5.6B
	Sockets	
P701B	25052372	NSCT-35P2269
P703A	25052216	NSCT-20P2113
JL912A	25051088	NSCT-4P875
	Capacitors	
C701	354721019	100uF,6.3V,Elect.
C712	353721019	100uF,6.3V,Elect.

U3: Motor driver circuit PC board (NAAF-7325-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q102	22241696R2	BA5984FP
Q501,Q502	22241383R2	NJM4565M-D
	Transistors	
Q531,Q532	2215410R2	RN1441
	Socket AS	
P102A	2002A391025	NSAS-10P0871
P103A	2002A391220 Socket	NSAS-12P0846
P911B	25051237	NSCT-12P1027
	Plugs	
P913A	25055705	NPLG-9P661
P914A	25055711	NPLG-15P667
	Jack	
P501	25045628	NPJ-2PDRW435, Audio out
	Capacitors	
C191	354742219	220uF,16V,Elect.
C503,C504	354784709	47uF,50V,Elect.
C533	354784799	0.47uF,50V,Elect.
C591,C592	354741019	100uF,16V,Elect.

PRINTED CIRCUIT BOARD PARTS LIST-2

U4: Display circuit PC board (NADIS-7326-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	FL tube	
Q721	212224	HNA-09SS28T
	LED	
D751	225338	SLR-332VR(h1=8mm)
	Socket AS	
P702	200EE390408	NSAS-4P0893
	Socket	
P701A	25052372	NSCT-35P2269
	Holder	
Q721A	27191157	FL
	Switches	
S702-S706	25035699	NPS-111-S662

U5: Power regulator circuit PC board (NAPS-7327-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	ICs	
Q901,Q904	222780055JRC	NJM78M05FA
	Transistors	
Q902,Q905	2211504	2SA950-Y
Q903	2214480R2	RN1403
	Diodes	
D901-D904,	⚠ 22380260 or	RL1N4003 or
D906	22380035	GP104003E
D907	224492700R2	UDZ27B, Zener
	Socket	
JL905B	25050270	NSCT-6P98
	Plugs	
JL912B	25055625	NPLG-4P587
P911A	25055708	NPLG-12P664
	Capacitors	
C901,C902	394043327S	3300uF,16V,Elect. (RS)
C903,C904	354742219	220uF,6.3V,Elect.
C905	354721019	100uF,6.3V,Elect.
C907	354741019	100uF,16V,Elect.
C908	354781019	100uF,50V,Elect.
C909,C910	354764709	47uF,35V,Elect.
C921-C923	374723344	0.33uF+/-5%,50V,Plastic.
	Resistors	
R907	453530564	5.6 ohm+/-5%,1/2W, Metal <MPP>
R907	453530224	2.2 ohm+/-5%,1/2W, Metal <MGR,MDT,MGT>
	Heat sinks	
Q901A ,Q904A	27160492	RAD-158
	Screws	
Q901B,Q904B	82143010	3P+10FN(BC)

U6: Power transformer PC board (NAPS-7328-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Coils	
L901	⚠ 231222	NCH-3454,Choke <MPP,MGR,MDT,MGT>
	Fuse holders	
F901A,F901B	⚠ 25050065	YSH403T <MPP,MGR,MGT>
	Sockets	
JL905A	25051110	NSCT-6P897
P903	⚠ 25051637	NSCT-2P1424, Outlet terminal <MPP,MGT>
P903	⚠ 25051990	NSCT-2P1777, Outlet terminal <MDT>
P903	⚠ 25052611	NSCT-2P2508, Outlet terminal <MGR>
	PLug	
P902	⚠ 25055676	NPLG-2P632

U7: Open/Close switch PC board (NAPS-7329-1B/1C/1D/1E)

CIRCUIT NO.	PART NO.	DESCRIPTION
	Switch	
S701	25035699	NPS-111-S662, Open/Close

<MPP> : European model only
<MDT> : Taiwanese model only
<MGT> : Asian model only
<MGR> : Chinese model only

MICROPROCESSOR TERMINAL DESCRIPTION

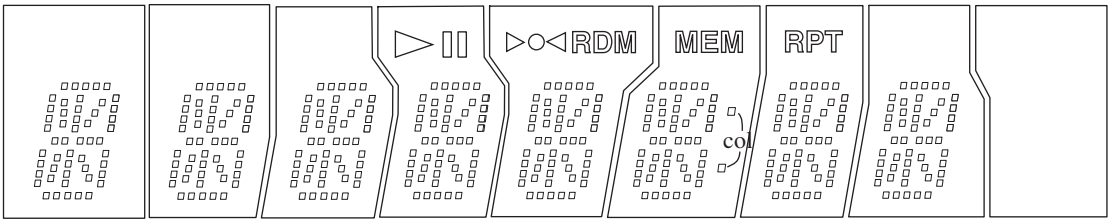
Q701: uPD78043FGF

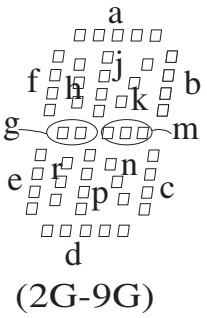
No.	SIGNAL	I/O	DESCRIPTION
1	3G	O	Grid control output terminals(G3-G9)
2	4G	O	
3	5G	O	
4	6G	O	
5	7G	O	
6	8G	O	
7	9G	O	
8	+5V	I	Power supply +5V
9	CLK	O	Command transfer clock output terminal to signal processing IC.
10	DATA	O	Command transfer data output terminal to signal processing IC.
11	XLT	O	Command transfer latch data output terminal to signal processing IC.
12	SENS2	I	Sens. 2 signal input terminal from signal processing IC.
13	AMUT	O	Muting output terminal to analog circuit. H=ON L=OFF
14	SQCK	O	Sub-code data output terminal to signal processing IC.
15	SENS	I	Sens. Signal input terminal from signal processing IC.
16	SQSO	I	Sub-code data input terminal from signal processing IC.
17	RESET	I	Reset signal input terminal.
18	RI INPUT	I	System control signal input terminal.
19	RI OUTPUT	O	System control signal output terminal.
20	GND	I	Power supply for A/D converter. (Ground)
21		O	Not used. (Open)
|		O	
26		O	
27	AD1	I	Operation input key for A/D converter.
28	AD0	I	Operation input key for A/D converter.
29	+5V	I	Power supply terminal. +5V
30	+5V	I	Power supply terminal for A/D converter. +5V
31	GND	I	Not used. (To connect to ground)
32		O	Not used. (Open)
33	GND	I	Ground terminal.
34	X1	I	System clock oscillation circuit input terminal. (5MHz)
35	X2	O	System clock oscillation circuit output terminal.

No.	SIGNAL	I/O	DESCRIPTION
36	STANDBY LED	O	Standby LED control terminal. H=ON, L=OFF
37	DSP RESET	O	Reset output terminal to signal processing IC.
38	POWER	O	Power source control output terminal. H=ON, L=OFF
39		O	Not used. (Open)
|		O	
41		O	
42	OPEN	O	Tray control output terminal.
43	CLOSE	O	Tray control output terminal.
44		O	Not used. (Open)
45		O	
46	SCOR	I	Sub-code frame detection signal input terminal from signal processing IC.
47	RMCN	I	Remote control signal input terminal.
48	GND	I	Ground terminal.
49		O	Not used. (Open)
|		O	
51		O	
52	+5V	I	Power supply terminal. +5V
53	OPEN SW	I	Tray open switch input terminal.
54	CLOSE SW	I	Tray close switch input terminal.
55		I	Not used. (Open)
|		I	
58		I	
59	FL OFF	O	Control output terminal of FL tube. H=ON, L=OFF
60	P1	O	Segment signal output terminals.
|	P2	O	
70	P3	O	
71	-VDISP		Negative power supply terminal of FL tube.
72	P12	O	Segment signal output terminals.
|	P13	O	
77	P14	O	
78		O	Not used. (Open)
79	1G	O	Grid signal output terminals.
80	2G	O	

FL TUBE VIEW

GRID ASSIGNMENT





(2G-9G)

ANODE CONNECTION

	9G	8G	7G	6G	5G	4G	3G	2G	1G
P1	a	a	a	a	a	a	a	a	-
P2	j	j	j	j	j	j	j	j	-
P3	h	h	h	h	h	h	h	h	-
P4	k	k	k	k	k	k	k	k	-
P5	b	b	b	b	b	b	b	b	-
P6	f	f	f	f	f	f	f	f	-
P7	g	g	g	g	g	g	g	g	-
P8	m	m	m	m	m	m	m	m	-
P9	c	c	c	c	c	c	c	c	-
P10	e	e	e	e	e	e	e	e	-
P11	n	n	n	n	n	n	n	n	-
P12	r	r	r	r	r	r	r	r	-
P13	p	p	p	p	p	p	p	p	-
P14	d	d	d	d	d	d	d	d	-
P15	-	-	-	▷	RDM	MEM	RPT	-	-
P16	-	-	-	▯▯	-	-	-	-	-
P17	-	-	-	-	-	col	-	-	-

PIN CONNECTION

PIN NO.	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25	26	27	28	29	30	31	32	33	34	35
CONNECTION	F1	F1	NP	9G	8G	7G	6G	5G	4G	3G	2G	1G	NP	NP	NP	P17	P16	P15	P14	P13	P12	P11	P10	P9	P8	P7	P6	P5	P4	P3	P2	P1	NP	F2	F2

Notes

1) Fn : Filament pin
2) nG : Grid pin
3) Pn : Anode pin
4) NP : No pin
5 NC : No connection

ADJUSTMENT PROCEDURE

1. SERVO ADJUSTMENT

1-1. Preparation

Set the VR123 is center position.

Connect the cables to the test point. (Fig.-1)

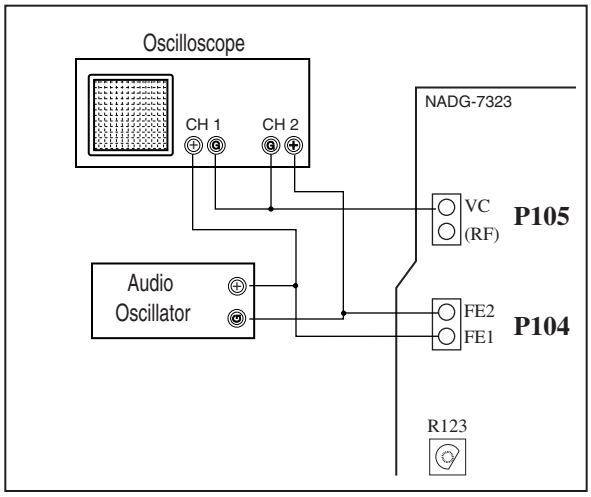
1-2. Focus gain adjustment

Load the test disc (YEDS-18) on the tray and play the track 2.

Adjust R123 until 1kHz the waveform of channels 1 and 2 on oscilloscope become specified level. (Fig.-2)

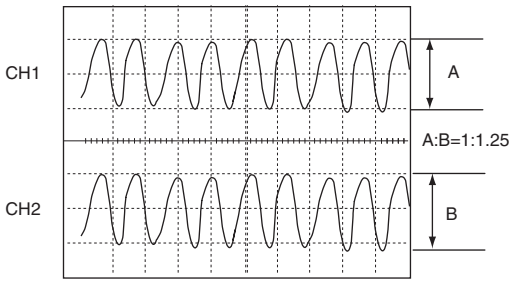
Check the jitter meter reading . It must be less than 12ns.

1-3. Remove the oscilloscope and audio oscillator.



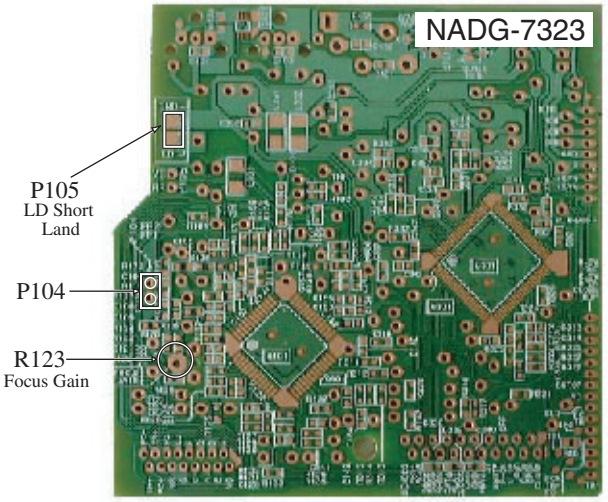
(Fig.-1)

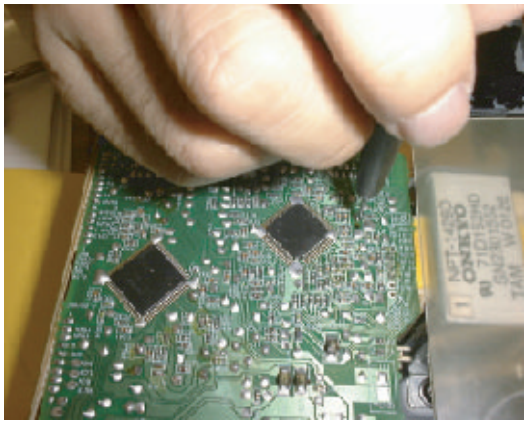
Wave form



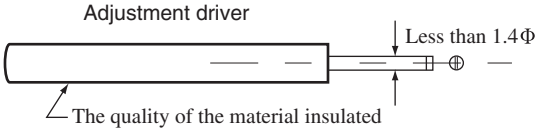
(Fig-2)

Adjustment points

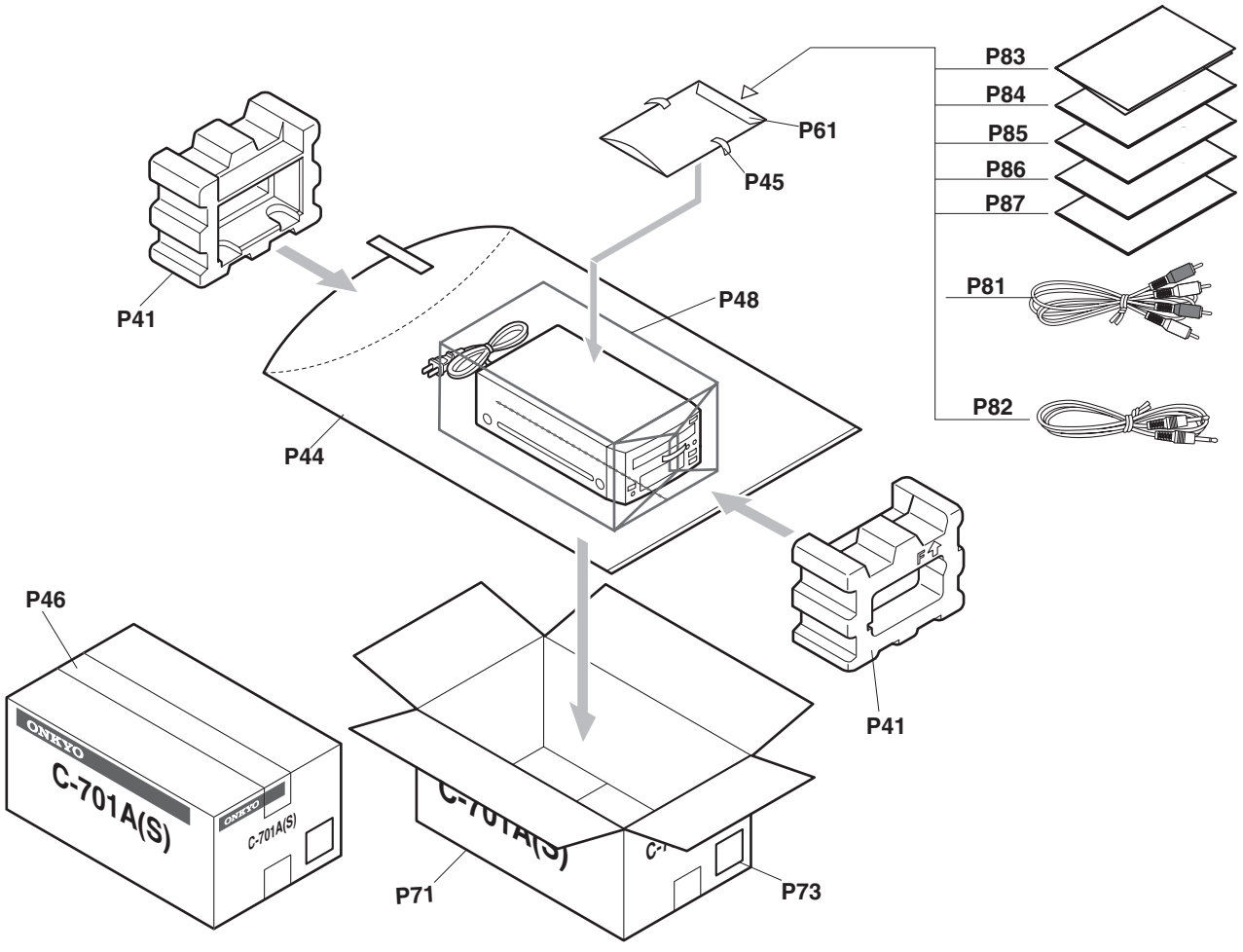




The driver for adjustment when adjusting is using the driver for adjustment insulated so that it may not be effected of a hand.



PACKING VIEW/ PARTS LIST



PARTS LIST

REF. NO.	PART NO.	DESCRIPTION
P41	29092023A	Pad assy
P44	29100123C	Poly bag, 430 x 550
P45	29110149	Cellophane tape
P46	29110098	PP tape
P48	29095906	Sheet
P61	29100097-1A	Poly bag, 350 x 250
P71	29053835	Carton box <MPP,MDT,MGT>
	29053836	Carton box <MGR>
P73	29362981A	EAN label
P81	2010376 or 2010396	Audio connection cable
P82	2010375 or 2010397	RI cable
P83	29343190	Instruction manual, E
P84	29343191	Instruction manual, U3FSI <MPP>
P85	29343192	Instruction manual, U3GDSW <MPP>
P86	29343193	Instruction manual, CT <MDT,MGR,MGT>
P87	29343203	Instruction manual, CS <MGR>

<MPP>: European model only
<MDT>: Taiwanese model only
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<MGR>: Chinese model only

ONKYO CORPORATION
Sales & Product Planning Div. : 2-1, Nisshin-cho, Neyagawa-shi, OSAKA 572-8540, JAPAN
Tel: 072-831-8111 Fax: 072-833-5222

ONKYO U.S.A. CORPORATION
18 Park Way, Upper Saddle River, N.J. 07458, U.S.A.
Tel: 201-785-2600 Fax: 201-785-2650 E-mail: onkyo@onkyousa.com

ONKYO EUROPE ELECTRONICS GmbH
Industriestrasse 20, 82110 Germering, GERMANY
Tel: 089-849-320 Fax: 089-849-3265 E-mail: info@onkyo.de

ONKYO CHINA LIMITED
Units 2102-2107, Metroplaza Tower I, 223 Hing Fong Road, Kwai Chung,
N.T., HONG KONG Tel: 852-2429-3118 Fax: 852-2428-9039

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HOMEPAGE
http://www.onkyo.co.jp/